



Gulf of Mexico Harmful Algal Bloom Bulletin

15 December 2005

NOAA Ocean Service

NOAA Satellites and Information Service

Last bulletin: December 12, 2005

Conditions Report

Harmful algal blooms have been identified in patches in Dixie, Levy, from southern Pinellas to Sarasota, and in Monroe Counties. The following patchy impacts are possible: low to moderate impacts today followed by no impacts tomorrow through Monday in southern Pinellas County, Manatee, Dixie and Levy Counties. In Sarasota County, patchy moderate to high impacts are possible today and very low impacts on possible tomorrow through Monday. In Monroe County, patchy none to very low impacts are possible in the gulfside Lower Keys today and Sunday. Low to moderate impacts are possible Friday, Saturday and Monday. Discolored water may be present.

Analysis

Cloudy imagery limits the analysis of the blooms located in Dixie, Levy and Sarasota Counties. The imagery has finally cleared to reveal two very patchy elevated chlorophyll features located approximately 14 miles offshore of Tampa Bay (up to 20 $\mu\text{g/l}$; 27°19'N, 83°8'W) and approximately 32 miles offshore of Sanibel Island (up to 7 $\mu\text{g/l}$; 26°15'N, 82°39'W). The onshore bloom of Lee and Collier continues to dissipate (12/12; FWRI). The larger bloom offshore of Lee and Collier Counties has been confirmed by sampling (12/3; FWRI) and may have moved south. A feature is located 22 miles southwest of Cape Romano and is approximately 32 miles wide (eastern extent at 25°33'N, 81°54' W; western extent at 25°14'N, 82°14' W). The continuation of variable, upwelling favorable winds may increase bloom intensity offshore, continue southerly and offshore transport, and reduce impacts onshore tomorrow through Monday. Onshore winds this afternoon may increase impacts.

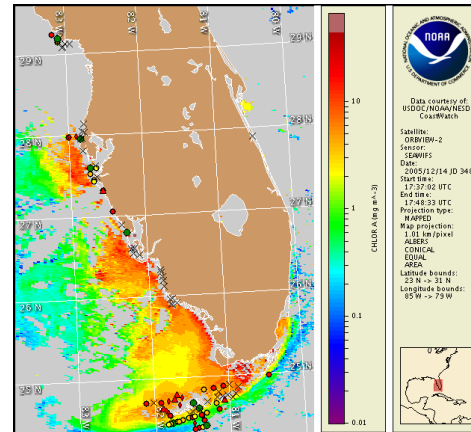
The bloom persists around the Keys, primarily on the gulfside of the Lower Keys. Based on the imagery, the bloom may have moved approximately 2.5 - 8 miles offshore of the oceanside of the Lower Keys and as far up as Key Largo. In the Middle Keys, an elevated

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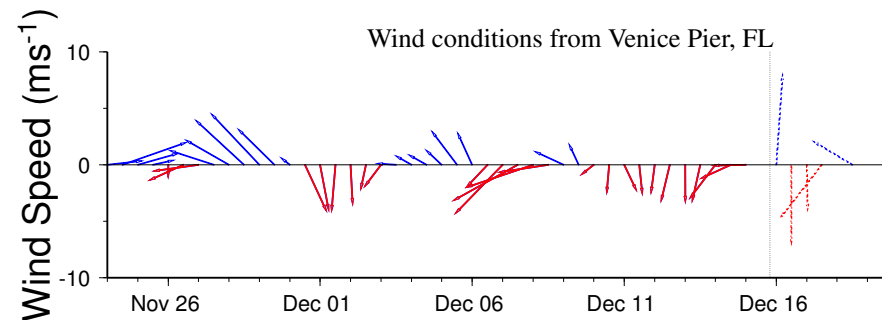
1. Data are restricted to civil marine applications only; i.e. federal, state, and local government use/distribution is permitted.
2. Image products may be published in newspapers. Any other publishing arrangements must receive OrbImage approval via the CoastWatch Program.

chlorophyll band (up to 8 $\mu\text{g/L}$) is located approximately 11 miles offshore in the gulfside (eastern extent at 24°55'N, 81°5' W; western extent at 24°52'N, 81°12' W). If possible, sampling is recommended. Strong north to northeasterlies winds Friday, Saturday, and Monday may cause southwesterly transport and increase impacts on the gulfside shorelines. Variable winds will likely maintain the bloom location, with an overall westerly expansion at the gulfside and an easterly expansion at the oceanside.

~Fenstermacher & Keller



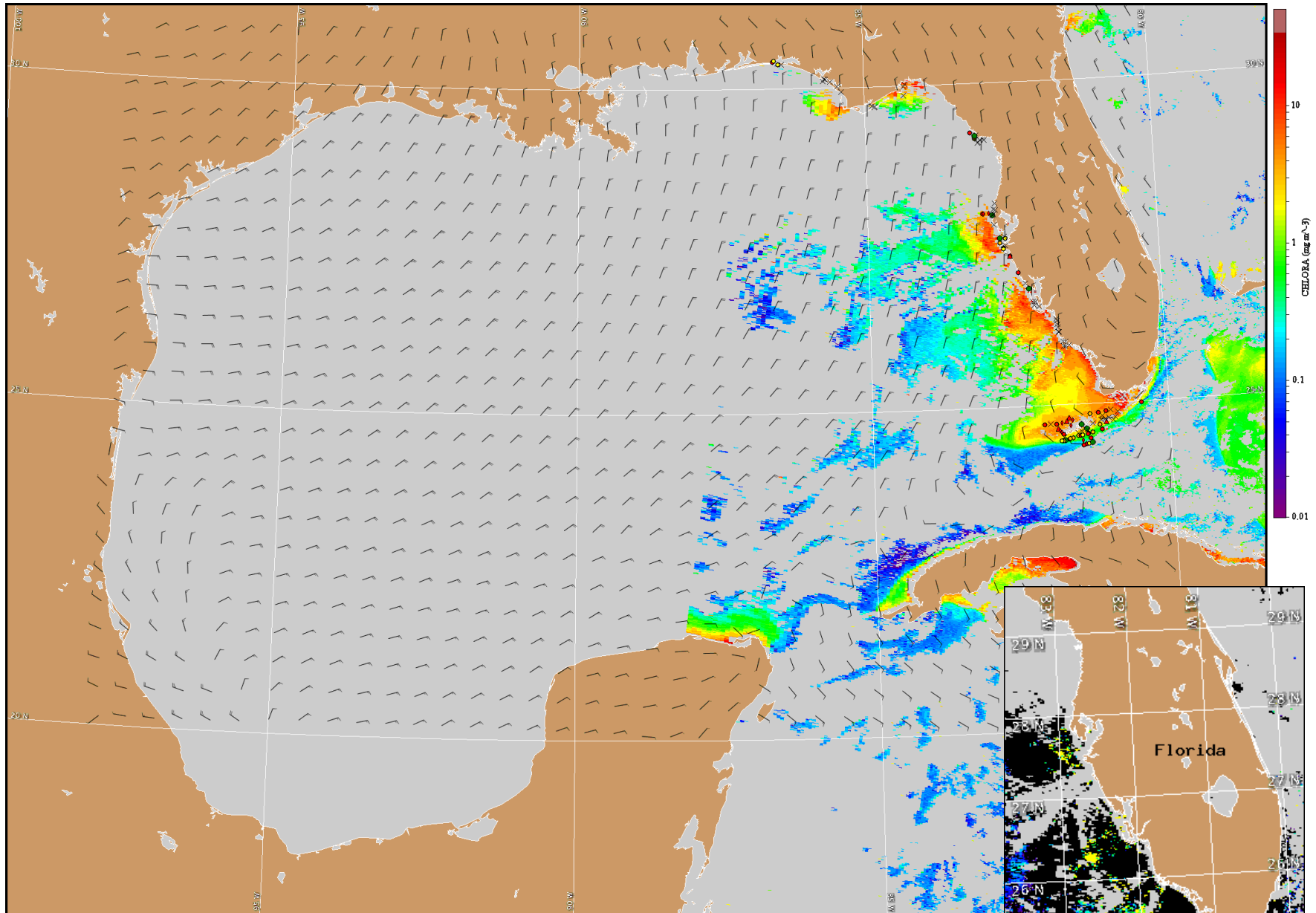
Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from December 5-8 shown as red squares (high), red triangles (medium), red diamonds (low b), red circles (low a), orange circles (very low b), yellow circles (very low a), green circles (present), and black "X" (not present).



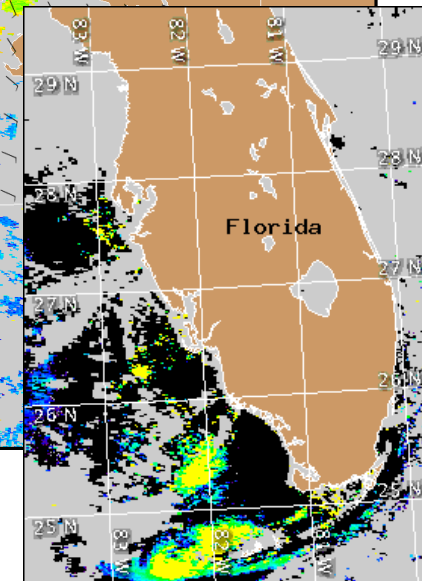
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts.

SW Florida: Strong south to southwesterlies today followed by north to northwesterlies tonight (15-20 knots; 8-10 m/s). Northerlies on Friday becoming northeasterlies Friday night and Saturday (15 knots; 8 m/s). Strong northwesterlies on Sunday and northeasterlies on Monday (15-20 knots; 8-10 m/s).

Keys: Southeasterlies clocking to westerlies by tonight (10-15 knots; 3-5 m/s). North to northeasterlies on Friday followed by northeast to easterlies on Saturday (10-15 knots; 3-5 m/s). Southeast winds on Sunday and northerlies on Monday (10-15 knots; 3-5 m/s).



Satellite chlorophyll image and forecast winds for December 16, 2005 12Z with cell concentration sampling data from December 5-8 shown as red squares (high), red triangles (medium), red diamonds (low b), red circles (low a), orange circles (very low b), yellow circles (very low a), green circles (present), and black "X" (not present).



Verified HAB areas shown in red. Other bloom areas shown in yellow (see p. 1 analysis for interpretation).

